

Data Sciences Program Tohoku University

Development of Human Resource Creating
Social, Life, and Environmental Foundations

Cooperating Graduate Schools:

Information Sciences (GSIS)*Coordinator

Life Sciences

Economics and Management

Engineering

Guidance 2017

Introduction

The Data Sciences Program (DSP) started on October 2015 as one of the “International Priority Graduate Programs (PGP) - Advanced Graduate Courses for International Students - ” supported by the Ministry of Education, Culture, Sports, and Technology (MEXT).

Our main purpose of this program is to develop highly-specialized global human resource of data sciences contributing to construction of social, life, and environmental foundations. The program is designed to acquire not only basic knowledge and skills of data sciences based on computer sciences, fundamental mathematics, and engineering, but also practical skills for discovery and solving the real world problems in life sciences, social sciences, economics, and others. Graduate School of Information Sciences (GSIS) conducts this program in collaboration with graduate schools of Life Sciences, Economics and Management, and Engineering in Tohoku University. The courses will mainly be given in English except for some optional subjects to learn Japanese language and culture.

Program

DSP consists of a 5-year graduate program combining 2-year master’s and 3-year doctor’s courses. Students should be affiliated with one of the four graduate schools: Graduate Schools of Information Sciences (GSIS), Life Sciences, Economics and Management, and Engineering. Primary and sub mentors are assigned to every student participating DSP for supervising their learning and research, where the primary mentor is the professor/associate professor accepting the student in her/his affiliated department of the graduate school, and the sub mentor belongs to GSIS. The course curriculum is constructed as follows:

Master’s course

(1) Lectures

- i. Specialized subjects provided by the affiliated graduate school of the student.
- ii. Fundamental subjects to learn information law and ethics for the treatment of big data.
- iii. Interdisciplinary subjects designated to data sciences: sensing, storage, computation/ analysis, data mining/ discovery and solving the real world problems

(2) Practical training and internship

- i. Training ‘camp’ to develop computational ability of big data
- ii. Internship in industries

(3) Writing a master thesis supervised by the mentors

Master’s course : 2 years (4 semesters)

Lectures (20 credits)

Specialized subjects (10 credits)

Fundamental subjects (4 credits)

Interdisciplinary data sciences subjects (6 credits)

Practical training and internship

Master’s thesis (8 credits)

Doctor's course

(1) Big data challenge: Project-based learning based on knowledge and skills of data science

(2) Advanced seminars: Data science-related meetings, symposia, and conferences assigned by DSP

(3) Writing doctor thesis supervised by the mentors

Doctor's course : 3 years (6 semesters)

Project-based learning(2 credits)
Advanced seminars(4 credits)
Doctor's thesis (8 credits)

Eligibility for DSP 2017

- Applicants must be an excellent student newly coming from abroad to study as a graduate-level foreign student.
- Applicants must have earned over **2.3** evaluation point average of their latest two-year's academic grade based on the calculation (see note [1]) and keep their high academic level after the entrance.
- Applicant must be able to leave for and arrive in Japan by the beginning of **October, 2017**.
- Applicants for DSP need to satisfy ONE of the following conditions:

For 5 years Master's and Doctor's Courses Applicants

- i) Those who have graduated, or will graduate, from a university (see note [2]) by **September 30, 2017**.
- ii) Those who have completed, or are expected to complete, a total of **15** years of school education (see note [3]) by **September 30, 2017** and have been recognized by the prospective graduate school of DSP to have performed well in classes related to the field of data sciences studies.
- iii) Those who have reached **22** years of age by **September 30, 2017** and have been recognized by the prospective graduate school of DSP, through individual qualification examinations, to have a scholastic ability equivalent or superior to those who have graduated from a university.

For 3 years Doctor's Course Applicants

- i) Those who have earned, or will earn, master's degree by **September 30, 2017**.
- ii) Those who have engaged in research activities for at least **2** years at an educational or research institution after graduation from a university and have been recognized by the prospective graduate school of DSP on the basis of their research performance to have a scholastic ability equivalent or superior to those who have earned master's degree.
- iii) Those who have reached **24** years of age by **September 30, 2017** and have been

recognized by each prospective graduate school of DSP through individual qualification examinations to have scholastic ability equivalent or superior to those who have earned master's degree.

Notes

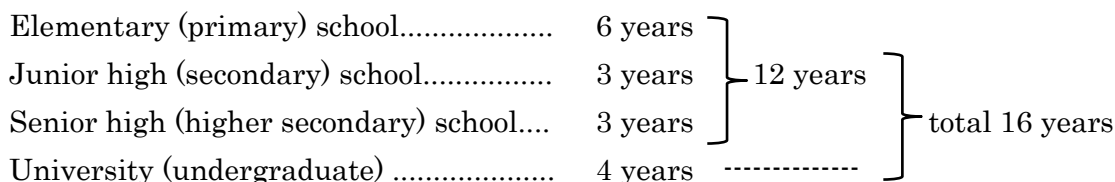
[1] The calculation procedure of the evaluate point average

Scale	Grade				
	4-scale evaluation	A		B	C
100-80		79-70	69-60	59-	
5-scale evaluation	S	A	B	C	D
	A	B	C	D	F
	100-90	89-80	79-70	69-60	59-
Evaluation Point	3	3	2	1	0
Number of your total credit	N4	N3	N2	N1	N0

$$\text{Evaluation Point} = \frac{(N4 + N3) \times 3 + N2 \times 2 + N1 \times 1}{N4 + N3 + N2 + N1}$$

[2] The term “graduated from a university” means a total of **16** years of educational programs, which consists of **12** years of school education and a **4** years undergraduate (bachelor) program.

e.g. Educational programs in Japan:



[3] The term “complete a total of **15** years of educational programs” means completion of a **3**-year undergraduate (bachelor) program, or finishing the **3**rd year of an undergraduate program, in addition to **12** years of school education.

Financial Support

Japanese government (MEXT) scholarship will be available for excellent students who intend to actively engage in the DSP program and contribute to its objectives. A monthly stipend is available; details of this and other information are listed below. Awardees of the scholarship will be selected from the candidates who are successful in the DSP examination process. The MEXT scholarship scheme applies only to those who live outside of Japan at the time of application and were born on or after **April 2, 1982**.

- (a) Exemption from Application, Admission and Tuition fees
 - (b) Monthly stipend: **146,000 JPY** for a master's course student and **147,000 JPY** for a doctor's course student
 - (c) Flight tickets between the applicant's country of nationality and Japan
- # Self-supporting international students are highly encouraged to participate in DSP.

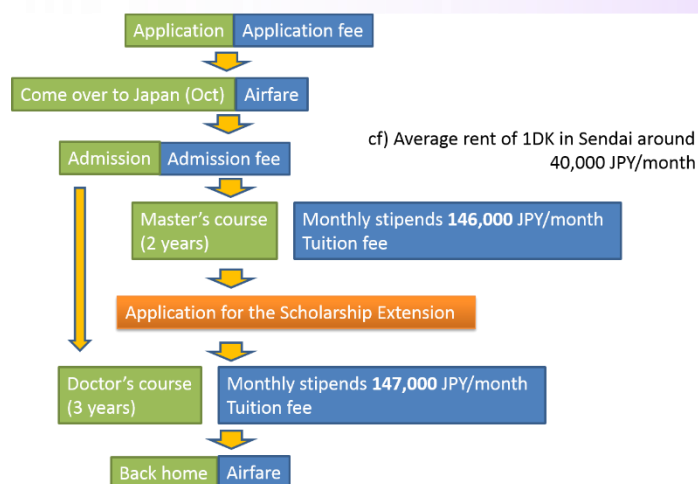
For master's and doctor's courses: 5 years

Number of Recipient: **7** students
 Term of the Scholarship: total **5** years (**2** years for the master + **3** years for the doctor). If a student fails to maintain a certain evaluation point average during the master's course, the Ministry may cancel the 3-year doctor's scholarship.

For doctor's course: 3 years

Number of Recipient: **3** students
 Term of the Scholarship: **3** years

MEXT Scholarship Advantage



Application

Application period

- Pre-application period: **December 5, 2016 – January 13, 2017**
- Deadline of Application: **February 3, 2017**
- Notification Period: **Beginning of April**
- Program begins on **October 1, 2017** (Fall semester, 2017)

How to Apply

Step 1: Find a candidate of the prospective supervisor among the faculty members in the field of your interest.

Applications will not be accepted without the consent of a prospective supervisor. The supervisor must be a professor or an associate professor in one of the departments in the graduate schools of DSP.

To look for faculty members, refer to the following websites:

· **Information Sciences**

<http://www.is.tohoku.ac.jp/en/laboratory/list_dept/>

· **Life Sciences**

<<http://www.lifesci.tohoku.ac.jp/en/research/>>

· **Economics and Management***

<<http://www.econ.tohoku.ac.jp/econ/english/staff/index.html>>

· **Departments of Electrical Engineering, Communication Engineering, and Electronic Engineering in Graduate School of Engineering**

<http://www.ecei.tohoku.ac.jp/ecei_web/about/index_e.html>

[Attention]

The DSP student affiliated with Graduate School of Economics and Management will automatically belong to Global Program in Economics and Management.

<<http://www.econ.tohoku.ac.jp/econ/english/IPEM/index.html>>

If you cannot find a candidate of the prospective supervisor whose scientific interest matches yours, contact DSP Admissions Office (ilo@is.tohoku.ac.jp).

Please note that we cannot necessarily guarantee to find an appropriate candidate.

Step 2: Contact directly the faculty member as a candidate of the prospective supervisor via e-mail and confirm her/his consent to accept you.

To contact the faculty members, it is strongly advisable to:

- Gather information about the faculty members and their field of research by looking at their publications, research papers, and personal websites.
- Provide properly your academic background and application information.
- Provide names of the other faculty members if contacting more than one at the same time.
- Provide the name of your current or the latest supervisor as a reference.

Important!

After getting the consent, you must ask your prospective supervisor to send a certificate of acceptance by e-mail to DSP Admissions Office (ilo@is.tohoku.ac.jp) (and to your e-mail address as Carbon Copy (CC) if you want).

[A sample of the certificate of acceptance as a candidate](#)

Step 3: Send the Pre-application form in the period of December 5, 2016 - January 13, 2017

※The Pre-application form will be ready by December 5, 2016

[Attention]

You must have the confirmation of acceptance from your prospective supervisor to do the Pre-application

Step 4: Firstly, send the photocopy of ALL the required documents via e-mail to DSP Admissions Office (ilo@is.tohoku.ac.jp). And after the Admissions Office check, you will be asked to send the original via air mail by February 3rd, 2017.

<Required documents>

1) Application for admission: **Form A**

※Photograph should be pated not stapled and have your name on the back

2) Two recommendation letters from different references: **Form B x2**

※Do not open the recommendation letter

3) Application for Japanese government (MEXT) scholarship: **Form C**

※Duplex printing

※Photograph should be pated not stapled and have your name on the back

4) Field of Study and Study Program: **Form D**

※Duplex printing

Please describe what you studied in “1 Field of Study”, and describe the study plan at Tohoku University you have decided with your prospective supervisor in “2 Study program in Japan in detail and concreteness”. If you are not clear about the study plan, please ask your prospective supervisor for the advice.

5) Official recommendation letter from the dean or higher level of the last institute attended: **Form E**

※Do not open the recommendation letter

6) Official academic transcript (s)

For a candidate of doctor’s course: official academic transcripts of undergraduate and master’s courses

For a candidate of master’s course: official academic transcript of undergraduate course

7) Certificate (s) of graduation

For a candidate of doctor’s course: one of the followings is necessary to submit.

- Photocopy of master’s diploma
- Certificate of graduation of master’s course
- Certificate of expected graduation of master’s course
- Certificate of enrollment of master’s course with expecting date of graduation

For a candidate of master's course: one of the followings is necessary to submit.

- Photocopy of bachelor's diploma
 - Certificate of graduation of undergraduate course
 - Certificate of expected graduation of undergraduate course
 - Certificate of enrollment of undergraduate course with expecting date of graduation
- 8) Photocopy of a score report of valid official English test as below (dated 2015 or later)
- TOEFL (iBT or PBT) ※We do not accept TOEFL-ITP
 - IELTS
 - TOEIC(R) Test
- ※Applicants for Graduate School of Economics and Management cannot use TOEIC(R) Test score report
Ref.) Applicants guide for GPEM
<http://www.econ.tohoku.ac.jp/econ/english/IPEM/PDF/guideline_GPEM_docter2016.pdf>
- 9) Photocopy of passport
- 10) Proof of citizenship (ONE of the followings)
- The copy of your family register
 - Photocopy of citizenship card/paper
- 11) Abstracts of theses of undergraduate and master's courses
- 12) Other supporting materials
- 13) 2 extra photographs of you (4×3cm (1.6"×1.2")).
- ※Write your name on the back

[Attention]

- Do not alter the prescribed format of the download files. Attach an additional sheet if necessary.
- Forms should be typed in English. Attach an English translation of the documents written in a language other than English.
- **Any of the application documents will not be returned to the applicant.**

Selection

Your applications will be forwarded to the examining committee of DSP. The examiner will inform you of the detailed method and schedule for the examination via e-mail soon.

Among those who have applied for the MEXT scholarship and passed the entrance examination of DSP, the examining committee of DSP will select and recommend the designated number of MEXT scholarship candidates to MEXT. The results of admission to DSP and the nomination for MEXT scholarship will be announced in the beginning of April.

Contact Information

DSP Admissions Office

Graduate School of Information Sciences, Tohoku University
Room 311, 6-3-09 Aramaki-aza-Aoba, Aoba-ku, Sendai, 980-8579
JAPAN

E-mail: ilo@is.tohoku.ac.jp Tel: +81-22-795-4691

※Those who are inquiring by e-mail, please: Include "DSP" in the subject line.

Related Websites

Tohoku University

- Academic research staff at Tohoku University <<http://db.tohoku.ac.jp/whois/TunvTopE.html>>

- Websites of Graduate Schools of DSP

Information Sciences <<http://www.is.tohoku.ac.jp/index-e.html>>

Life Sciences <<http://www.lifesci.tohoku.ac.jp/en/>>

Economics and Management <<http://www.econ.tohoku.ac.jp/econ/english/index.html>>

Engineering <<http://www.eng.tohoku.ac.jp/english/>>

- Fee Waivers and Deferment of Payments <<http://www2.he.tohoku.ac.jp/menjo/>>

Supports for International Students

- Tohoku University International Support Office (TU Support)

<http://sup.bureau.tohoku.ac.jp/index_en.html>

- Center for International Exchange (CIE), Tohoku University

<<http://www.insc.tohoku.ac.jp/cms/index-e.cgi>>

- Guidebook for Prospective Students

(http://www.tohoku.ac.jp/en/admissions/images/tohokuuniversity_guidebook.pdf)>

- Pocket guide for Procedures International Students

(<http://sup.bureau.tohoku.ac.jp/images/PocketGuide.pdf>)>

- Japan Student Service Organization (JASSO) <<http://www.jasso.go.jp/en/index.html>>

>> Student guide to Japan <http://www.jasso.go.jp/study_j/sgtj_e.html>

>> Scholarships for International Students in Japan

<http://www.jasso.go.jp/en/study_j/scholarships/index.html>

Others

- Ministry of Education, Culture, Sports, Science and Technology (MEXT)

<<http://www.mext.go.jp/english/>>